**ERIC B. ZHOU**

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U.S. Citizen

Education

2023 - 2026 **Boston University Questrom School of Business** Boston, MA

(Expected) Doctoral Candidate in Information Systems

Advised by Dokyun Lee

2021 - 2023 **Washington University in St. Louis Olin Business School** St. Louis, MO

Master of Science in Business Administration

2019 - 2021 **Carnegie Mellon University Tepper School of Business** Pittsburgh, PA

Master of Business Administration, *Business Analytics Track*

Concentrations in *Business Technology* and *Operations Research*

2014 – 2018 **Washington University in St. Louis Olin Business School** St. Louis, MO

Bachelor of Science in Business Administration

Majors in *Finance* and *Marketing*

Research Interests

Computational creativity Ethics of AI and technology

Unintended consequences of AI Economics of unstructured data

Working Papers

**Zhou, Eric**; Lee, Dokyun. “Generative AI, Human Creativity, and Art.” *Preparing for submission.*

“Recent artificial intelligence (AI) tools have demonstrated their ability to produce outputs traditionally considered creative. One such system is text-to-image generative AI, which automates humans' execution to generate high-quality digital artworks. Utilizing a dataset of over 4 million artworks from more than 50,000 unique users, our research shows that text-to-image AI substantially enhances human creative productivity by 25% and increases the likelihood of receiving a favorite per view by a similar percentage. While peak artwork content novelty (focal objects and object relationships) increases over time, average content novelty declines, suggesting an expanding but inefficient creative space. Additionally, there is a consistent reduction in visual novelty (pixel-level stylistic elements). Importantly, AI-assisted artists who can produce more novel ideas, regardless of overall novelty prior to adoption, produce artworks that their peers evaluate more favorably. The results imply that ideation and likely filtering are necessary skills in the text-to-image process, thus giving rise to “generative synesthesia” - the harmonious blending of human senses and AI mechanics to discover new creative workflow.”

**Zhou, Eric**; Hui, Xiang; Lee, Dokyun. “Economic Value of Image-Based Seller Quality Signals.” *Work in progress.*

***WISE 2022 Best Student Paper Finalist***

“In online marketplaces, sellers can rely on alternative mechanisms to signal their quality when they lack rich transaction histories. Using scraped data on GPU sales from eBay, we find that certain image signals can substitute for reputation to increase conversion rates amongst sellers with less than 100% positive reputation, and conditional on making a sale, can realize a 5% price premium on average. However, the effects are only significant for less reputable sellers.”

Lee, Dokyun; **Zhou, Eric**; Mao, Chengfeng; Kane, Gerald. “Interpretable Machine Learning for Theory Building.” *On hold. Accepted to MISQ Author Workshop.*

“Recent advances in Interpretable Machine Learning (IML) offer flexible, scalable solutions to help humans develop novel hypotheses using large-scale unstructured data. We demonstrate by applying a novel IML algorithm to three datasets and reproduce theoretical insights from published research with minimal time and human intervention.”

Ongoing Projects

**Zhou, Eric**; Lee, Dokyun. “Generative Entrants vs. Human Incumbents” *Analyzing data.*

Lee, Dokyun; **Zhou, Eric**. New Generative AI Project! *Analyzing data.*

Conference Presentations & Workshops

October 2023 **Zhou, Eric**; Lee, Dokyun. “Generative AI, Human Creativity, and Art.”

*INFORMS Annual Meeting 2023* at Phoenix, AZ

October 2023 **Zhou, Eric**; Lee, Dokyun. “Generative AI, Human Creativity, and Art.”

*INFORMS Workshop on Data Science* at Phoenix, AZ

September 2023 **Zhou, Eric**; Lee, Dokyun. “Generative AI, Human Creativity, and Art.”

*Wharton Business and Generative AI Workshop* at San Fransisco, CA

December 2022 **Zhou, Eric**; Hui, Xiang; Lee, Dokyun. “Economic Value of Image-Based Seller Quality Signals.”

*Workshop on Information Systems and Economics (WISE)* at Copenhagen, DK

***Best Student Paper Finalist***

August 2020 Lee, Dokyun; **Zhou, Eric**; Mao, Chengfeng; Kane, Gerald. “Interpretable Machine Learning for Theory Building.”

*MISQ Author Workshop*, virtual

Teaching Experience

Spring 2023Head Teaching Assistant, DAT 500W: A/B Testing in Business

Taught by Xiang Hui & Christopher Mondy

Research Experience

2019 - 2021 **Graduate Research Assistant** at Carnegie Mellon University Pittsburgh, PA

Advisor: Dokyun Lee

* Applied a novel Deep Learning algorithm Focused Concept Miner (FCM) on three text datasets to reproduce theoretical insights published in top journals.
* Created [FCM](http://fcminer.com/) user guide and demonstration, serving as liaison with faculty alpha/beta testers ([Github link](https://github.com/ericbzhou/fcm_cli_guide)).
* Prepared course material for *Deep Learning for Business: Mining Unstructured Data*, covering technical details on neural language models like Transformer, BERT, GPT1, 2, & 3, etc.

Industry Experience

2021 - 2022 **Machine Learning Contractor** at Angel Flights West (Remote) Santa Monica, CA

* Trained a pilot clustering pipeline to identify core pilot segments based on preference surveys.
* Consulted on how to implement a mission classification model based on the results of the pilot segments.
* Ran simulations to validate centroid definitions and ensure robustness to random parameter initializations.
* Implemented and deployed model in Microsoft Azure, allowing the client to scale operations to new data.
* Created mission classification pipeline to identify mission types and optimize matching with pilot types.
* Designing flight recommendation algorithm to complement ongoing micro-targeting campaigns.

2018 - 2019 **Market** **Research Analyst** at Nielsen BASES Wilton, CT

*Product Innovation Analytics*

* Designed and conducted research plans and data analysis to evaluate new product concepts.
* Consulted for Fortune 500 CPG clients on product ideation and market entry for long-term success.
* Co-led initiative to develop predictive model that forecasts incremental brand value of new innovations.

Skills

**Computer** **Language**

|  |  |
| --- | --- |
| Proficient: Python, R, SQL, LaTeX, Web Scraping | English: Native |
| Basic: Java, Julia | Mandarin: Proficient |
|  | French: Proficient |

Coursework

Fall 2020Economining (PhD Seminar in Business Technologies)

Fall 2021Microeconomics I

Empirical Methods in Business: Part B (Advanced Econometrics)

Doctoral Seminar in Marketing

Spring 2022Microeconomics II

Causal Inference

Analytical Modeling in Marketing: Part A

Empirical Methods in Structural Modeling

Fall 2022Empirical Methods in Business: Part A

Seminar in Strategy & Organization

Experimental and Behavioral Research Methods: Part A

Spring 2023Strategic Management of Innovation & Technology

Seminar in Strategy

Independent Study in Strategy: Creativity

Fall 2023Applied Machine Learning

Seminar in Generative AI and Causal Inference with Text

Honors & Awards

Oct. 2023 INFORMS Gold Student Scholarship

Dec. 2022 WISE 2022 Best Student Paper Finalist

May 2019 Tepper School of Business merit-based scholarship

Feb. 2019 Nielsen BASES Client Service Superstar Award

Nov. 2014 2nd place, Olin Foundations of Business Product Design Competition

May 2014 Olin Business School merit-based scholarship

May 2014 Xerox Award for Innovation & Information Technology

June 2013 1st place in nation, Database Design & Applications at FBLA National Leadership Conference

Activities

Dance Instructor for CMU KPDC - Carnegie Mellon University

Dancer for KASA Dance - Carnegie Mellon University

Dancer for Dancers’ Symposium – Carnegie Mellon University

Executive board member, videographer, dance instructor for PL4Y Dance - Washington University in St. Louis